

Serial No. 10/666,166  
67,008-079  
S-5696

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. This listing of claims will replace all prior listings.

1-2 (CANCELED)

3. (PREVIOUSLY PRESENTED) The vortex generator as recited in claim 21, wherein said surface comprises a rotating aerodynamic surface, said plurality of vorticity generating protuberances located generally parallel to a feathering axis.

4. (PREVIOUSLY PRESENTED) The vortex generator as recited in claim 21, wherein said surface comprises a rotor blade, said plurality of vorticity generating protuberances located generally parallel to a feathering axis.

5. (PREVIOUSLY PRESENTED) The vortex generator as recited in claim 21, wherein said plurality of vorticity generating protuberances comprise deployable members.

6-11. (CANCELED)

12. (PREVIOUSLY PRESENTED) A method as recited in claim 26, wherein said step (1) further comprises locating a plurality of vorticity generating protuberances on a tip of a rotating member which generates the primary tip vortex.

13. (PREVIOUSLY PRESENTED) A method as recited in claim 26, wherein said step (1) further comprises locating a plurality of vorticity generating protuberances on a tip of a fixed member which generates the primary tip vortex.

14. (PREVIOUSLY PRESENTED) A method as recited in claim 26, further comprising the step of:

Serial No. 10/666,166  
67,008-079  
S-5696

selectively extending a vorticity generating protuberances from a tip which generates the primary tip vortex.

15-18. (CANCELED)

19. (PREVIOUSLY PRESENTED) A method as recited in claim 26, further comprising the step of:

selectively extending a vorticity generating protuberance from a tip of a rotor blade which generates the primary tip vortex in response to an azimuthally position of the rotor blade.

20. (PREVIOUSLY PRESENTED) A method as recited in claim 26, wherein step (1) further comprises locating a plurality of vorticity generating protuberances on a distal end between an upper and lower aerodynamic surface of a tip which generates the primary tip vortex.

21. (PREVIOUSLY PRESENTED) A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, wherein said plurality of vorticity generating protuberances are of a scale commensurate to a boundary layer thickness.

Serial No. 10/666,166  
67,008-079  
S-5696

22. (PREVIOUSLY PRESENTED) A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include multiple pins.

23. (PREVIOUSLY PRESENTED) A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include multiple vortex plows.

24. (PREVIOUSLY PRESENTED) A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include multiple vortex ramps.

25. (PREVIOUSLY PRESENTED) A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating small-scale vortices from a distal end of a surface that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip to destabilize the core of the primary tip vortex such that a decay

Serial No. 10/666,166  
67,008-079  
S-5696

rate of the core is accelerated while maintaining the primary tip vortex as a single vortex with the core being increasing diffused downstream of the tip.

26. (PREVIOUSLY PRESENTED) A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating small-scale vortices from within the core of the primary tip vortex from a distal end of a surface that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip to destabilize the core of the primary tip vortex such that a decay rate of the core is accelerated.

27. (PREVIOUSLY PRESENTED) A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating a single primary tip vortex from a distal end of a rotary aerodynamic surface;

(2) generating small-scale vortices from a distal end of the aerodynamic surface that are ingested and at least partially entrained within a forming core of the single primary tip vortex as the primary tip vortex develops from the tip;

(3) maintaining the single primary tip vortex while accelerating a decay rate of the core by the ingested small-scale vortices generated in said step (2).

28. (NEW) A method as recited in claim 26, wherein said step (1) further comprises generating the small-scale vortices from multiple vortex plows.